

## **REMARKS**

1. In response to the Office Action mailed February 8, 2006, Applicants respectfully request reconsideration. Claims 1-45 were last presented for examination in this application. All claims were rejected in the outstanding office action. By the foregoing Amendments, no claims have been amended. Claims 46 and 47 have been added. No claims have been canceled. Thus, upon entry of this paper, claims 1-47 will remain pending in this application. Of these forty-seven (47) claims, seven (7) claims (claims 1, 20, 29, 39, 44, 45 and 46) are independent. Based on the above Amendments and following Remarks, Applicants respectfully request that all outstanding objections and rejections be reconsidered, and that they be withdrawn.

2. Support for the newly added claim 46 and 47 is found in originally filed claim 1, on page 15, lines 4-7 and page 16, lines 1-7 of the specification, as well as elsewhere throughout the originally filed specification, drawings and claims.

### ***Art of Record***

3. Applicants acknowledge receipt of form PTO-892 identifying additional references made of record by the Examiner.

### ***Telephone Interview***

4. Applicants thanks the Examiner for the courtesies extended to Applicants' representative during a May 4, 2006, telephone interview in which the outstanding rejection was discussed. Applicants' separate record of the substance of the interview is contained in the comments below. During the interview, the Examiner provided a new rejection of the claims which was not necessary by any amendments or actions of Applicants. In light of this new rejection, the Examiner agreed to make any subsequent action non-final.

***Rejections Under 35 U.S.C. § 103(a)***

5. Claims 1-38 and 45 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over “Assay Explorer: Bringing Screening Software Up to Speed,” Jonathan Wingfield (Molecular Connection, Winter 2000) (hereinafter “Wingfield”) in view of U.S. Patent No. 6,408,308 to Maslyn et al. (hereinafter “Maslyn”). As discussed during the interview, the rejection applies only to claims 1-38 and not claim 45. This rejection is respectively traversed for the following reasons.

6. With respect to independent claim 1, the rejection is traversed since the Office Action failed to establish a *prima facie* case of obviousness. The Office Action failed to show that the cited prior art references teach or suggest, either alone or in combination, all the elements of the claims and the Office Action failed to provide a motivation to combine the references.

7. Claim 1 as currently presented claims: “a method for managing biological information related to a biological experiment comprising: acquiring one or more biological values of the biological information using a probe array to conduct the biological experiment; generating a data template including one or more identifiers related to the use of the probe array; specifying in the data template one or more biological attributes for each of the one or more identifiers; and receiving in the data template the one or more biological values for at least one of the one or more identifiers in accordance with the one or more biological attributes.” (See, Applicants’ claim 1, above.).

8. To properly reject a claim under Section 103(a) a *prima facie* case of obviousness needs to establish that the references, either alone or in combination, teach every claim element. (See, MPEP §§ 706.02(j) & 2143.). The Office Action stated that all of the following claim features of claim 1 are shown in Wingfield, including “specifying in the data template the one or more identifies related to the use of the probe array.” (See, Office Action, page 3.). Claim 1 does not claim “specifying in the data template the one or more identifies related to the use of the probe array” as alleged by the Office Action. Instead, claim 1 includes the feature of “specifying in the data template ***one or more biological attributes*** for each of the one or more identifiers.” (See, Applicants’ claim 1, above; emphasis added.). During the interview, the Examiner indicated that the rejection in the

Office Action, despite the error in the language, would still be applicable to claim as presently presented. Also during the interview, the Examiner emphasized that in Figure 1 of Wingfield the drop-down boxes indicate the selection of an attribute. Specifically, in Figure 1 of Wingfield, the Examiner alleges that the “plate” and “plate id” are the attributes.

9. Applicants respectively disagree with the Examiner’s assertions that Wingfield teaches or suggests “specifying in the data template *one or more biological attributes* for each of the one or more identifiers” as claimed by claim 1. First, Figure 1 of Wingfield is a dialog box for used to initiate the data validation process of the system described in Wingfield. (See, Wingfield page 21.). Contrary to the Examiner’s assertion, Figure 1 is not even generating a data template but rather Figure 1 is the initiation to process data gathered in table 1. Thus, the dialog box cannot generate a data template and thereby fails to teach specifying in the data template one or more biological attributes as claimed by claim 1. Second, the “plate” and “plate id” shown in Wingfield are not biological attributes, but rather field types used during the validation process. The “plate” and “plate id” are not biological attributes or characteristics of the biological values obtained by the probe array. Instead these field identifiers of Wingfield describe the location from which the data was obtained on a plate. The Office Action has not cited any other portion of Wingfield or Maslyn for teaching “specifying in the data template *one or more biological attributes* for each of the one or more identifiers” as claimed by claim 1. Therefore, the Office Action has failed to establish a *prima facie* case of obviousness and the rejection of claim 1 should be withdrawn for being improper.

10. Furthermore, the Examiner also failed to articulate a suggestion or motivation to combine the references and thus failed to establish a *prima facie* case of obviousness as required by law and under MPEP Sections 706.02(j) & 2143. (See, *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998) (“To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness.”)). Sufficient evidential support for the motivation to combine must be shown in the prior art suggesting a combination of references. (See, *In re Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002); see also, *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000) (“[P]articular findings must be made as

to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.”).).

11. The Examiner asserts that Wingfield substantially teaches Applicants’ invention as recited in independent claim 1. The Examiner admits on page 3, however, that Wingfield fails to teach “the acquired one or more biological value information using a probe array.” As clarified during the interview, the Examiner indicated that the seemingly contrary statement that “Wingfield teaches ... acquiring one or more biological values of the biological information using a probe to conduct the biological experiment” (See, Office Action, page 3.) is to be understood as referring the first portion of claim 1, namely “acquiring one or more biological values.”

12. To remedy the admitted deficiency in Wingfield, the Examiner turns to Maslyn for “disclos[ing] database tables for storing the acquired data from the microarray.” (See, Office Action, page 4.).

13. The only statement regarding the motivation to combine Wingfield with Maslyn to reject claim 1 is “it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Wingfield’s system to include the data table for storing the acquired data from the microarray as taught by Maslyn in order to provide storage for storing experimental data.” (See, Office Action, page 4.). The Office Action fails to cite any passage of Wingfield that would motivate one of ordinary skill in the art to combine the teachings of Wingfield with Maslyn. Further, when asked for during the interview the Examiner failed to provide any motivation to combine these references. Instead the Examiner indicated during the interview that Wingfield and Maslyn allegedly teach all the elements of claim 1. A bald assertion of all elements are present in the cited references is not a substitute for the absence of objective reasons, sufficient evidence and reasoned findings. (See, MPEP 2143.01; “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”). The Office Action has not objectively explained the motivation to combine Wingfield with Maslyn, and thus based on Federal Circuit precedent it can be reasonably assumed the Examiner selected the references with the assistance of hindsight. (See, *In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998).). The Federal Circuit has repeatedly stated that the use of hindsight must be guarded against

by having the Examiner provide sufficient evidence to support the motivation. (*See, e.g., In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998); *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999)). In this rejection, it is clear that hindsight is used since the Office Action provided no motivation to combine Wingfield with Maslyn, except for the fact that allegedly all elements of Applicants' claimed invention are found in both references. Therefore, without proper objective evidence the Office Action fails to establish a proper *prima facie* case of obviousness to combine Wingfield with Maslyn, and thus the rejection of claim 1 should be withdrawn.

14. With respect to independent claim 20, the rejection is traversed since the Office Action failed to address all elements of the claim and failed to establish a *prima facie* case of obviousness. The Office Action failed to show that the cited prior art references teach or suggest, either alone or in combination, all the elements of the claims and the Office Action failed to provide a motivation to combine the references.

15. In rejecting claim 20, the Office Action stated that "Claim 20 is rejected under the same reason as to claim, in addition, Wingfield also discloses receiving..." (*See* Office Action, page 7.). The Office Action made a comparison of claim 20 to another claim, but failed to specify the other claim. Under 37 C.F.R. § 1.104(c)(2), "the pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified." The Office Action did not clearly explain the pertinence of each reference to claim 20 since the Office Action failed to specify the other claim. Further, claim 20 has features not claimed in the other independent claims, and which were not specifically discussed in the rejection, namely "displaying the first data template to the first user in response to the selection." Therefore, the Office Action is deficient with respect to the rejection of claim 20 and this rejection must be withdrawn.

15. As stated in above in paragraph 8, a *prima facie* case of obviousness needs to establish that the references, either alone or in combination, teach every claim element. With respect to independent claim 20, the Office Action failed to show that Wingfield and Maslyn, either alone or in combination, teach the feature of "displaying the first data template to the first user in response to the selection." Specifically Wingfield does not provide the user with a selection of data templates to be displaying in response the selection. The Office Action has not cited any portion of Wingfield or Maslyn for teaching

“displaying the first data template to the first user in response to the selection” as claimed by claim 20. Therefore, the Office Action has failed to establish a *prima facie* case of obviousness and the rejection of claim 20 should be withdrawn for being improper.

16. For the reasons discussed above in paragraphs 10-13, the Office Action has similarly failed to provide sufficient evidence of a motivation to combine Wingfield and Maslyn to reject claim 20. Therefore, without proper objective evidence the Office Action fails to establish a proper *prima facie* case of obviousness to combine Wingfield with Maslyn, and thus the rejection of claim 20 should be withdrawn.

17. With respect to independent claim 29, the rejection is traversed since the Office Action did not address any elements of the claim and failed to establish a *prima facie* case of obviousness. The Office Action failed to show that the cited prior art references teach or suggest, either alone or in combination, all the elements of the claims and the Office Action failed to provide a motivation to combine the references.

18. The only statement regarding claim 29 is: “Claim 29 is rejected under the same reason as to claim 1.” (*See*, Office Action, page 8.). The MPEP discourages the use of an omnibus rejection as being uninformative. (*See*, MPEP 707.07(d).). Claim 29 as currently presented claims, “a computer program product, comprising: a template generator that generates a data template including one or more identifiers of one or more biological experiments using probe arrays, each identifying an attribute of the experiment; a value receiver that receives values for the identifiers in accordance with their attributes; and a data storage manager that stores the values in a data structure; wherein the values are based on the one or more biological experiments.” None of these product features of independent claim 29 are in the method claim of independent claim 1 and thus it is not proper to reject claim 29 for the same reasons as claim 1. Therefore, the rejection of claim 29 is improper and should be withdrawn.

19. As stated in above in paragraph 8, a *prima facie* case of obviousness needs to establish that the references, either alone or in combination, teach every claim element. With respect to independent claim 29, the Office Action failed to show that Wingfield and Maslyn, either alone or in combination, teach the feature of “a template generator that generates a data template including one or more identifiers of one or more biological experiments using probe arrays, each identifying an attribute of the experiment.” Since the

Office Action stated that claim 29 is rejected for the same reasons as claim 1 and claim does not claim “a template generator” the Office Action has failed to show all elements of the claims are present. Further, in rejecting claim 1 the Office Action relies on Figure 1 of Wingfield to allegedly teach “generating a template.” However, Figure 1 is the initiation dialog box to start the validate process of data. (*See*, Wingfield, page 21.). Thus, Figure 1 cannot teach even the method of “generating a template.” The Office Action has not cited any portion of Wingfield or Maslyn for teaching “a template generator that generates a data template including one or more identifiers of one or more biological experiments using probe arrays, each identifying an attribute of the experiment” as claimed by claim 29. Therefore, the Office Action has failed to establish a *prima facie* case of obviousness and the rejection of claim 29 should be withdrawn for being improper.

20. For the reasons discussed above in paragraphs 10-13, the Office Action has similarly failed to provide sufficient evidence of a motivation to combine Wingfield and Maslyn to reject claim 29. Therefore, without proper objective evidence the Office Action fails to establish a proper *prima facie* case of obviousness to combine Wingfield with Maslyn, and thus the rejection of claim 29 should be withdrawn.

21. Claims 39-44 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,594,858 to Blevins (hereinafter “Blevins”) in view of Maslyn. During the interview, the Examiner withdrew this rejection and asserted a new rejection of claims 39-44. Under the new rejections, claims 39-44 have now been rejected under 35 U.S.C. § 103(a) as being unpatentable over Wingfield in view of Maslyn. As discussed during the interview, the references Blevins is not relevant to claims 39-44. In light of this new rejection, the Examiner agreed to make any subsequent action non-final. This rejection is respectively traversed for the following reasons.

22. With respect to independent claims 39 and 44, the rejection is traversed since the Office Action failed to establish a *prima facie* case of obviousness. The Office Action failed to show that the cited prior art references teach or suggest, either alone or in combination, all the elements of the claims and the Office Action failed to provide a motivation to combine the references.

23. As stated in above in paragraph 8, a *prima facie* case of obviousness needs to establish that the references, either alone or in combination, teach every claim element.

With respect to independent claims 39 and 44, the Office Action failed to show that Wingfield and Maslyn, either alone or in combination, teach the feature of “a data template generator.” The Office Action stated that “Wingfield discloses generating template to store biological experiment.” (*See*, Wingfield, page 10.). No citations of Wingfield are provided to support this new rejection of claims 39 and 44. However, in rejecting claim 1 the Office Action relies on Figure 1 of Wingfield to allegedly teach “generating a template.” However, Figure 1 is the initiation dialog box to start the validate process of data. (*See*, Wingfield, page 21.). Thus, Figure 1 cannot teach even the method of “generating a template” or “a data template generator.” The Office Action has not cited any portion of Wingfield or Maslyn for teaching “a data template generator” as claimed by claim 39 and 44. Therefore, the Office Action has failed to establish a *prima facie* case of obviousness and the rejection of claim 39 should be withdrawn for being improper.

24. The standard for provide sufficient evidence to combine references under Section 103, is provided above in paragraph 10. The Office Action alleges that “Wingfield discloses generating template to store biological experiment. Wingfield does not explicitly disclose the acquired one or more biological value information using a probe array... .” (*See*, Wingfield, page 10.). To supply this admittedly missing feature of Wingfield, the Examiner turns to Maslyn which is alleged to “disclose[] database tables for storing the acquired data from the microarray.” (*See*, Wingfield, page 11.).

25. The only statement regarding the motivation to combine Wingfield with Maslyn to reject claims 39 and 44 is “it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Wingfield’s system to include the data table for storing the acquired data from the microarray as taught by Maslyn in order to provide storage for storing experimental data.” (*See*, Office Action, page 11.). The Office Action fails to cite any passage of Wingfield that would motivate one of ordinary skill in the art to combine the teachings of Wingfield with Maslyn. A bald assertion of all elements are present in the cited references is not a substitute for the absence of objective reasons, sufficient evidence and reasoned findings. (*See*, MPEP 2143.01 “The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”.). The Office Action has not objectively explained the motivation to combine Wingfield with Maslyn, and thus based on Federal Circuit precedent its can be reasonable assumed the Examiner selected



the references with the assistance of hindsight. (*See, In re Rouffet*, 149 F.3d 1350, 1358 (Fed. Cir. 1998).). The Federal Circuit has repeatedly stated that the use of hindsight must be guarded against by having the Examiner provide sufficient evidence to support the motivation. (*See, e.g., In re Rouffet*, 149 F.3d 1350 (Fed. Cir. 1998); *In re Dembiczak*, 175 F.3d 994 (Fed. Cir. 1999).). In this rejection, it is clear that hindsight is used since the Office Action provided no motivation to combine Wingfield with Maslyn, except for the fact that allegedly all elements of Applicants' claimed invention are found in both references. Further, since this is a new rejection made during the interview, Applicants were unable to discuss the grounds for motivation. Therefore, without proper objective evidence the Office Action fails to establish a proper *prima facie* case of obviousness to combine Wingfield with Maslyn, and thus the rejection of claims 39 and 44 should be withdrawn.

26. Since there is no objective evidence to support the rejection of these claims, these claims have been rejected on the basis of facts within the personal knowledge of the Examiner, namely the motivation used to combine Wingfield in view of Maslyn. Accordingly, under 37 C.F.R. § 1.104(d)(2) the Applicants hereby request that the Examiner provide an affidavit supporting the Examiner's assertion that the combination of Wingfield in view of Maslyn is *prima facie* proper, or, in the alternative, to withdraw the rejection of the claims.

27. For reasons similar to those noted above, Applicants respectfully request that the Section 103 rejection of independent claims 1, 20, 29, 39 and 44 be reconsidered and withdrawn.

***Rejection Under 35 U.S.C. § 102(e)***

28. Claim 45 is rejected under 35 U.S.C. § 102(e) as being anticipated by Wingfield. Wingfield is not an application for patent that was published under Section 102(e)(1) or a patent granted on an application for patent under Section 102(e)(2). Therefore, Wingfield fails to qualify as prior art under 35 U.S.C. § 102(e). The following remarks would apply if Wingfield qualifies as prior art under any other section of 35 U.S.C. § 102. This rejection is respectively traversed for the following reasons.

29. Under Section 102, for a reference “to anticipate a claim, the reference must teach every element of the claim.” (*See*, MPEP § 2131.). Claim 45 as currently presented claims “capturing instrument operational values directly from at least one instrument used to conduct the biological experiment by the experimental manager.” The Office Action alleges that lines 27-29 of the first column on page 23 of Wingfield teaches this feature by disclosing “a layout can compare retrieve different run wherein each run obtains the data from the wells plates.” (*See*, Office Action page 14.). However, this portion of Wingfield is from a sentence that reads: “But with Assay Explorer, *scientists can quickly tweak a layout and can* readily compare the data retrieved from different runs.” (*See*, Wingfield, page 23, first column, lines 26-29; emphasis added.). This passage does not support the Examiner allegation that “a layout can compare retrieve different runs.” Further, the Office Action has not cited any portion of Wingfield for teaching claim 45’s feature of “capturing instrument operational values *directly* from at least one instrument.” Wingfield refers to creating different spreadsheets for each run and tweaking the spreadsheets. (*See*, Wingfield, page 23, first column, lines 18-21; emphasis added.). This portion of Wingfield fails to teach capturing instrument operational values *directly* from at least one instrument. Therefore, the Office Action has failed to show that Wingfield teaches every element of claim 45 and the rejection of claim 45 should be withdrawn for being improper.

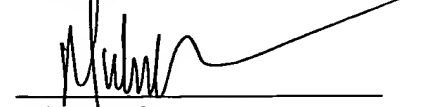
#### ***Dependent Claims***

30. The dependent claims incorporate all of the subject matter of their respective independent claims and add additional subject matter which makes them *a fortiori* independently patentable over the art of record. Accordingly, Applicants respectfully request that the outstanding rejections of the dependent claims be reconsidered and withdrawn.

***Conclusion***

31. In view of the foregoing, this application should be in condition for allowance. A notice to this effect is respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael G. Verga', is written over a horizontal line.

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